

INJURY MORTALITY

AMONG CHILDREN AND ADOLESCENTS

ARIZONA, 1989-1999

by

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PURPOSE

The purpose of this report is to provide information concerning injury mortality among infants, children (ages 1-14) and adolescents (ages 15-19) in Arizona. The data for 1999 are placed in a temporal context by comparison with the data for the preceding ten years.

METHODS AND SOURCES

Data on the number and characteristics of injury deaths among Arizona residents 19 years old or younger were obtained from the death certificates filed with the Arizona Department of Health Services.

In this report, fatal injuries as the underlying cause of death are defined and coded according to ICD-9* in the following manner:

E800-E949: unintentional injuries;

E950-E979: specified intent, self-inflicted injury in suicide (E950-E959) and injuries purposely inflicted by other person (E960-E979);

E980-E989: unknown, an investigation by a medical or legal authority has not determined whether the injuries are unintentional, homicidal or suicidal.

**International Statistical Classification of Diseases, Injuries and Causes of Death. Ninth*

Revision. Geneva: World Health Organization, 1977.

Population denominators for Arizona residents, used to calculate rates, are projections from the Population Statistics Unit in the Arizona Department of Economic Security (DES: data for 1989 and 1993-1999) and the U.S. Census Bureau (data for 1990 and data by ethnic group for 1999). Detailed population data by gender, age and county were unavailable for 1991-1992. In order to obtain the population denominators for these two years, the 1990 percentages of population breakdowns (or census shares) were applied to 1991 and 1992 total state or county population estimates published by the DES.

KEY FINDINGS

✱ Injury is the leading cause of death among children (except infants under one year) and adolescents both nationwide and in Arizona. In 1999, injury surpassed all major diseases as the cause of premature mortality among preschoolers 1-4 years old, children ages 10-14 and adolescents 15-19 years of age (**Table 1**).

✱ Between 1989 and 1999 injuries caused seven out of every ten deaths (66.7 percent, or 4,311 fatal injuries among 6,466 total deaths of Arizonans 1-19 years old. Unintentional injuries accounted for 1.9 times as many deaths as homicides and suicides combined (**Figure 1**).

✧ Compared to the national rates of injury mortality, the 1999 injury death rates were 31 percent higher for Arizona children under five and 16 percent higher for adolescents 15-19 years old (**Figure 2, Table 3**). The rates for children ages 5-14 were lower in Arizona than nationally.

✧ Among age groups (**Table 1**), children 5-9 years old had the lowest 1999 rate of injury death (5.8 fatalities per 100,000 Arizona children in this age group), followed by children 10-14 years of age (11.5/100,000), preschoolers 1-4 years old (19.1/100,000), and infants (39.7/100,000), while the rate was 11 times as high for adolescents 15 to 19 years of age (63.8/100,000) compared to children 5-9 years old.

✧ Motor vehicle collisions and drowning are the two major events, which lead to an unintentional injury death for children and adolescents (**Figure 4, Table 4**). Motor vehicle crashes fatally injured 166 Arizona infants, children and adolescents in 1999 (**Table 12**).

✧ The third leading event responsible for an unintentional injury death differed according to age group (**Table 4**). In Arizona, in the eleven-year period from 1989 to 1999, it was suffocation (aspiration of food or other foreign object or mechanical suffocation) among infants and children 5 to 9 years old, burning by fire among preschoolers one to four years old, firearms among children ages 10-14 and poisoning/drug misuse

among adolescents 15-19 years old.

✧ **Figure 5** depicts the number of deaths from unintentional injuries by single-year of age in the eleven-year period from 1989 through 1999. The greatest number of unintentional injury fatalities in 1989-1999 occurred to persons aged 18.

✧ During the same period, drowning fatalities reached a high of 117 for one-year olds (**Figure 6**).

✧ The distribution of 1989-1999 motor vehicle fatalities shows a sharp increase for persons aged 11 to 18, rising from 39 for 11-year-olds to 276 for 18-year-olds (**Figure 7**).

✧ Suicide deaths peaked at 145 for 18-year-olds in the entire period from 1989 through 1999 (**Figure 8**).

✧ The greatest number of homicide deaths in 1989-1999 also occurred to 18-year-olds (**Figure 9**).

✧ From 1989 to 1999, among 2,064 fatally injured infants and children under 15 years, 296 (14.3 percent) were victims of neglect, maltreatment or murder (**Figure 10, Table 18**).

✧ During 1998 (the latest year for which the data are available by state), the injury mortality rates among preschoolers 0-4 years old ranged from 4.1/100,000 in New Hampshire to 49.1/100,000 in the District of Columbia. Arizona preschoolers ranked ninth highest in the nation (**Figure 11**).

✧ Injury mortality rates for 5-9 year olds ranged from 1.4/100,000 in Rhode Island to 23.5/100,000 in Mississippi. Arizona ranked twenty-ninth (**Figure 12**) among the 50 states and the District of Columbia.

✧ Among children 10-14 years old in 1998, injury mortality rates ranged from 4.7/100,000 in Vermont to 27.9/100,000 in Mississippi. Arizona children ages 10-14 also ranked fifteenth in the nation (**Figure 13**).

✧ Injury mortality rates among adolescents 15-19 years old ranged from 34.2/100,000 in New York to 159.1/100,000 in the District of Columbia. Arizona adolescents ranked thirteenth among all states (**Figure 14**).

✧ Drowning mortality rates for children under 5 years of age ranged from zero (no fatalities) in Montana, New Hampshire, Nebraska, North Dakota, Wyoming, Vermont and the District of Columbia to 12/100,000 in South Dakota. Arizona, ranked fourth highest in the nation (**Figure 15**).

✧ Motor vehicle-related injuries displaced drowning as the leading cause of unintentional injury death among Arizona preschoolers 1-4 years old. Motor vehicle crashes were the leading cause of unintentional injury death among preschoolers in nine of the eleven years from 1989 to 1999 (**Table 14**).

✧ The number of drowning deaths per 100,000 Arizona children 1-4 years old decreased from 9.7 in 1998 to 6.2 in 1999 (**Table 20**), the second lowest annual rate since 1989 (**Figure 16**).

✧ The homicide rate among teenagers 15-19 years old decreased for the fourth consecutive year from 33.4/100,000 in 1995 to 16.2/100,000 in 1999 (**Table 1**). During 1999, Black adolescents were 8.7 times more likely than non-Hispanic whites to be murdered (48.9/100,000 vs. 5.6/100,000; **Table 19**).

✧ The rate of suicide fatalities among adolescents 15-19 years old declined from 23.7/100,000 in 1997 to 10.6/100,000 in 1999 (**Table 1**). During 1999, American Indian teenagers had the highest suicide death rate among the racial/ethnic groups in Arizona (**Table 19**).

✧ Black infants and American Indian children and adolescents had the highest rates of injury death among ethnic groups in 1999. (**Table 19**).